

Bitcoin in Venezuela:

A case study of the use of new cryptographic currencies in Venezuela.

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ABSTRACT

This paper has the objective of investigating how Venezuelans are using cryptocurrencies, with focus on Bitcoin, as a way for individuals to circumvent the problems caused by hyperinflation and deal with the current political and economic near-collapse of Venezuelan society, which has caused widespread poverty, food shortages, and forced migration with as many as 4 million Venezuelans seeking refuge abroad.

I also intend to draw critical attention to the use of Bitcoin and cryptocurrencies as a way for individuals to protect themselves against the abuses of authoritarian regimes, as the technology offers a possibility of reconfiguring the social relations of individuals and the state in Venezuela, but also consciously paying attention to the possible harms of this new technology.

Generally, Bitcoin doesn't always have the best press as it has been associated with speculative crazes, scams, environmental hazards, as well as criminal activity such as terrorism and tax evasion. The skepticism in academic circles have been more nuanced, but still substantial, which I think is due to the many fields that Bitcoin touches upon. Computer science scholars will tend to focus on the technical aspects of Bitcoin, economist scholars on the economic aspects, while humanitarian scholars will tend to address the real life applications from a social and historical standpoint. All of these scholars have something important to contribute to the understanding of Bitcoin but a humanitarian, for example, might miss important aspects of Bitcoin if he/she misunderstand some basic way that Bitcoin works on a technological level. Similarly a computer scientist might miss important aspects of the phenomenon if he/she does not consider the actual real life applications of the technology etc. My research - as a student of humanities - will obviously focus less on economic or technological aspects of Bitcoin, but nevertheless some attention must be given to those aspects.

Bitcoin and cryptocurrencies is an emerging technology, which may be used as an opt-out/exit in crisis situations, such as the present one in Venezuela. It may have interesting use cases as a

remittance system, as a tool to protect against the indirect confiscation which happens when a currency hyper-inflates, and possibly also as a tool for refugees and migrants to preserve their wealth in an environment where it's hard to hide physical possessions from persecutors. Furthermore, this paper explores the ideas of neo-Spinozean power structures, in which the multitudes can play a larger role to decide the direction of society and create a less hierarchical, decentralized power structure.

Keywords: Bitcoin; Venezuela; hyperinflation; cryptocurrency; technology; Neo-Spinozean; decentralization.

I. INTRODUCTION

Part of my curriculum is to explore the roots of development problems and - through investigation - produce new knowledge about it. Therefore, I believe Venezuela is a relevant contemporary case, where fragile institutions fail to protect its citizens against abuses of power and where the government neglects due democratic process.

Bitcoin, the world's first decentralized cryptocurrency, has been offering Venezuelans citizens an alternative to using the weak national currency and a way to circumvent the controls imposed by an authoritarian regime in a number of ways. I have chosen to mainly focus on Bitcoin as it is presently the most used and most liquid cryptocurrency in Venezuela.

More broadly, Bitcoin is a system which challenges the idea of money as being the product of the state and as such is part of a wider discussion on what money really is. In the words of Nigel Dodd:

During the past two decades or so, there has been a growing interest in the changing nature of money. Researchers have been looking into the emergence of new monetary forms, for example, complementary currencies and Internet or electronic monies. Scholars have been predicting that the relationship between money and the state is coming under increasing threat from "alternative" monies. (Dodd 2014: 07)

In this paper, I discuss how Venezuelan citizens are defying their government, using an economic alternative as a response to the rupture of their trust in the state institutions to manage the national currency.

Thus, I formulate the following research question:

How do citizens in Venezuela use the new form of cryptographic currency, Bitcoin, and what critical questions arise from the development of new forms of non-state money, in an unstable political and economic conditions??

II. CONTEXTUAL FRAMEWORK

Brief explanation of the current situation in Venezuela.



Photo from Human Rights Watch, 2017

The political and economic crisis in Venezuela began during the presidency of Hugo Chavez and it has continued and worsened into the presidency of Nicolas Maduro. Venezuela presently remains in a state of emergency, repeatedly extended since January 2016. In May 2018, President Maduro won the election for president against an opposition, which had been weakened by years of repression by the government. In addition, allegations that the polls had not met international standards of freedom and fairness were widespread. No government institutions independent of the president remain today in Venezuela to act as a check on his executive power. Both Maduro and Chavez appointed judges to the courts who barely make pretense of independence. The government has been repressing protesters and anti-government institutions through violent crackdowns. In addition, the government has jailed political opponents and stripped power from the opposition-led legislature. (Human Rights Watch 2019)

In economic terms, a number of destructive government policies, among them arbitrary expropriations as well as currency and price controls, in combination with widespread corruption

and mismanagement in government, have gradually destroyed the capacity of the Venezuelan economy to produce even the most basic consumer goods used by the people of the country to survive in daily life. In addition, falling oil production, outdated oil production methods leading to high costs, debt interest payments, an increasing number of adverse legal judgments from past expropriations, and an increasing reluctance of creditors (even from politically supportive countries like China and Russia) to lend new money are excluding Venezuela's access to hard currency to buy goods from abroad. (Ellis 2017: 23)

The price of the local currency, the Venezuelan bolivar, has hyperinflated. From an annual inflation rate of 69% in 2014, 181% in 2015, the inflation rate went completely out of control in 2018 with a rate of 1.698.488%, and in 2019 the inflation rate is 10.000.000 . Under these circumstances, with the destruction of the currency, anarchic situations have arisen with acute poverty and high crime rates as a consequence. (International Monetary Fund 2019)

The ongoing political and economic crisis in Venezuela has led to a massive outflow of migrants and refugees. According to the UNHCR, over 4 million Venezuelans have left the country up until this date. This mass migration of Venezuelans has reached historical numbers in terms of human displacement in Latin America and the Caribbean. (UNHCR 2019)

The Venezuelan government has been criticised heavily by the international community but has responded defiantly. In 2010, the Supreme Court commanded that individuals or organizations receiving foreign funding can be prosecuted for treason. The same year, the National Assembly enacted legislation blocking organizations that “defend political rights” or “monitor the performance of public bodies” from getting international assistance. (Human Rights Watch 2019)

Some observers have claimed the crisis cannot just be understood as an ordinary political or economic crisis but as *“a criminal act without precedent in Latin America: the capture and systematic looting of a state, achieved by first capturing its institutions through mass mobilization and bureaucratic machinations, then increasing the control of the state through military force, as the criminal nature of the act and its consequences become apparent to the nations citizens.”* (Ellis 2017: 23)

III. METHODOLOGY

In this chapter, I will outline the research design of this study. I've chosen Venezuela for many reasons. One of them is that it is a contemporary case of societal crisis, which has had both dramatically negative effects on the quality of life of Venezuelans and which has caused the biggest migration of individuals in Latin America in modern times. Out of this chaotic situation - in both an economic and a social sense, I want to investigate in which way Bitcoin has been deployed and used by the citizens of Venezuela as an alternative to the devalued national currency system.

Considerations regarding field work

Prior to beginning my project, I considered traveling to Venezuela to conduct field work by interviewing individuals using Bitcoin and possibly try to exchange and use Bitcoin myself while in the country to investigate the outcome. However, I decided against this option as I believe the security situation in the country would make this research a somewhat dangerous or at least highly impractical endeavour.

Since Bitcoin is an international phenomenon and available to be used by anyone who has an Internet connection and an Internet-connected device, I did experiment with making Bitcoin transactions using mobile phones and various digital cryptocurrency wallets for computers. I think this was important because, without actually seeing how the technology works in practise, the whole concept of Bitcoin remains rather abstract. In this way, I gained an experience which I believe helped me to understand how the technology is actually used on the ground in Venezuela.

Online Ethnography

I have therefore chosen to conduct this research using the method of online ethnography.

“Conducting Internet ethnography is a fairly new methodological approach, however, it has been previously described as a valid form of naturalistic inquiry “(Keim-Malpass et al. 2014: 1687)

While I would have gone to Venezuela had the security situation allowed for it, I do find this method to fit the topic - for several reasons. First of all, Bitcoin is a distinctly online phenomenon invented by computer scientists. Second of all, Bitcoin is mainly used surreptitiously by individual Venezuelans. This means that many Venezuelan Bitcoin users are quite reluctant to openly talk about Bitcoin. Often, through my online conversations, I was not even able to ascertain the exact identity of the person I was speaking to, or asked to not reveal the identity. Clearly individuals are concerned both with government retribution and of becoming the targets or criminals in a more general sense.

Furthermore, in line with Jörgen Skågeby who says “the growing body of research in the field of Internet studies provide support to the viability of online methods to examine virtual community practises, behaviours and sentiments” (Granello & Wheaton 2004; Hine 2005; Kinnevy & Enosh 2002; Maczewski, et al. 2004 in Skågeby 2011: 410). The subject at hand deals with virtual community practises and I therefore find it appropriate to use this research method.

3.1 The online ethnographic study- entrance and data collection

The study of online interaction has been a particularly prominent area for qualitative researchers. This usually entails the examination of online discussion groups, such as online support groups and discussions boards. (Bryman 2012: 663).

“The daily influx of new information available online represents a wide range of current events, viewpoints, opinions, and virtual communities that allow ordinary citizens to have an active voice with an accessible medium in which to express it. Internet support groups, resources, social networking sites such as Twitter, Facebook, and Instagram, and illness blogs have recently emerged as popular media.” (Keim-Malpessa et al. 2013: 1687)

In line with this thinking, I decided to follow - over a period of several weeks - the conversation of Twitter accounts, which I made sure belonged to Venezuelan Bitcoin users with a significant number of followers and real engagement. This I consider my “hidden entry” into the community, as my purpose was merely to observe the conversations and find out what problems were the topic of conversation. I thus initially started with document collection, i.e. gathering important

conversation threads and reading online material, which was referred to in the threads. My line of thinking was here inspired by Murthy who ascertains: “when conducted alongside other data (e.g. interviews) the sites can provide unique in-depth autobiographical account of scenes and respondents” (Murthy 2008: 846).

In line with the above quote, I also decided to explore another angle of entrance, which was more open in nature.

3.2 Online asynchronous interviews

I decided to conduct direct interviews in writing with actual Bitcoin users in Venezuela and asynchronous interviews are the ones made by emails and not in a real time, such as instant messages or chats (Skågeby 2011). For this purpose, I used a key informant in Denmark who has a substantial following on “Bitcoin Twitter” (Twitter users who mostly talk about Bitcoin), including some Venezuelan followers. This allowed me to identify Bitcoin users in Venezuela, including some which had been using Bitcoin for as long as since 2012. Once I had identified some individuals in Venezuela, I prepared a list of questions which was sent through email, explaining initially the aim of my research, and saying that their identities would be preserved if they wished.

I noticed that the fact of having an insider informant facilitating the contact led to the establishment of a certain level of trust, and I received replies to all my interviews in a relative short period of time. (This was particularly noticeable as my own attempts at contacting Venezuelans directly did not result in much engagement or led to requests of payment in exchange for information, something I declined as I thought it might skew the answers).

I felt that these form of interviews were the most appropriate as I wanted people to speak freely, which is not given in a place like Venezuela. Several of them asked me to expressly keep their identities hidden and once person even wrote: “Please, don’t share this email. Things can get pretty dangerous in here”. Most preferred to communicate with me indirectly via the Twitter account of a well-known Venezuelan “bitcoiner” that they trusted. I took considerable time to interact with the person behind this Twitter account and I refer to him as my “informant” below.

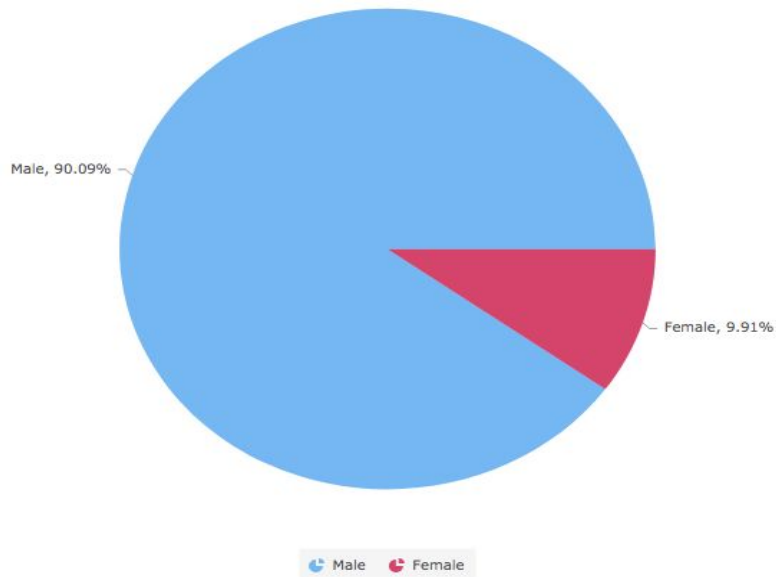
The careful development of a trusting research relationship is not merely time consuming, but also essential and rewarding in terms of generating high quality data: “Email communication is then constructed as a continuous alternation, an informal and formal style in answering the question, between interviewing and conversing” (Kivits in Skågeby 2011: 416).

I also wanted people to speak freely about their experiences, not disturbed by my agenda or personality as I felt this would lead to the disclosure of more honest information. Also, I wanted it to be clear that I was not really in a position to help them, which they might have expected and unconsciously hoped for if I had established a more personal relationship with them. Had they thought otherwise, I might have received less authentic answers, namely the one they imagined I wanted to hear. However, my research was focused on their experience, not my own opinion. I also decided to let the participants decide by themselves whether they wanted to answer in English or Spanish in order for them to not be limited by a possible lack of English-language skills.

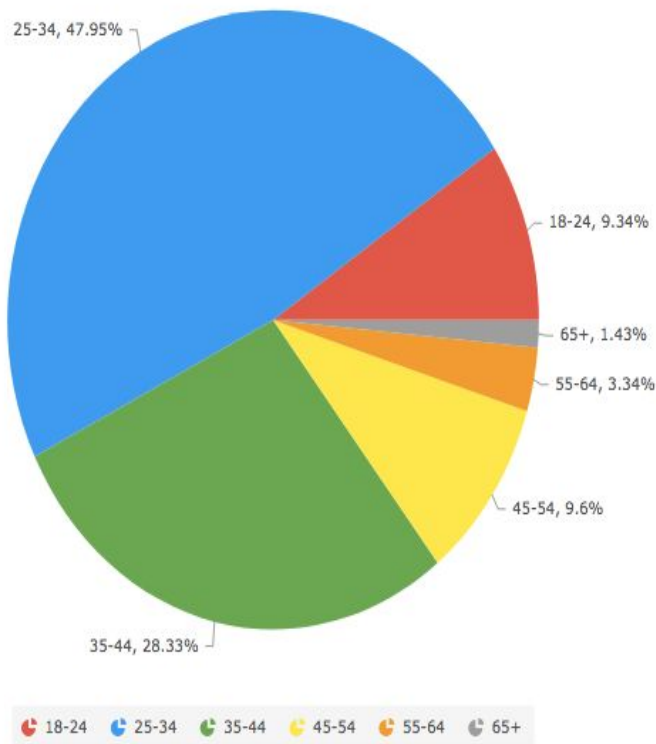
I did not receive as much empirical data as I had hoped after having sent out my initial questionnaire, and I contacted my Venezuelan Twitter informant to do a follow-up interview (Bryman 2012) with the interviewees which I had found through him, asking for more concrete information. He was, however, reluctant to have me ask questions, which were too concrete for security reasons. Instead he proposed to answer (in writing) my follow-up questions himself, as he has been in the Bitcoin space since 2012.

Another problem - which I think was unavoidable in the circumstances - was that the respondents were skewed in favour of young males answering (out of 8 respondents, I only got a response from 1 female). This does however reflect my general assumption that Bitcoiners world-wide are predominantly young and male. “Ultimately, Bitcoin is a demographic mega-trend: Younger demographics are leading in terms of Bitcoin awareness, familiarity, perception, conviction, propensity to purchase, and ownership rates.”¹

Bitcoin Community Engagement by Gender (Google Analytics)
coin.dance



Bitcoin Community Engagement by Age (Google Analytics | 18+ only)
coin.dance



These graphics are from the Coin Dance Website, defining itself as “community-driven Bitcoin statistics and services”.²

This gender disparity in Bitcoin is not the focus of my paper, although it might merit further investigation. I merely mention it because there is some evidence to support that my sample was actually representative.

3.3 Ethical Considerations

“Research ethics come particularly in focus when conducting online ethnographies” (Sharf in Skågeby 2011: 418). Online material can be quite dynamic and fleeting. If one has an ulterior motive, it can be quite easy to cherry pick texts or fragments of conversations outside their real context and thus unethically present a false picture of reality (Skågeby 2011). Furthermore, I was careful to consider how to engage in a respectful interaction with the interviewees while at the same time stressing the need for authentic responses. The interviewer must also be aware of the situation of the interviewee and consider that full disclosure could be problematic to the latter and might even present a danger.

Another ethical consideration which I pondered upon while doing my research was whether I should hide the identity of the Twitter accounts I will refer to. After careful consideration, however, I decided not to take the step to hide participant’s screen names. The majority of the conversation on Bitcoin Twitter is done by pseudonyms accounts in the first place so I thought it was reasonable to assume that if a user did not use a pseudonym, he or she would also not mind me using a real name. Furthermore, all Twitter participants know that conversations are publicly available and anyone can read them. Since the Venezuelans were clearly concerned with their privacy in other situations, they would surely be aware of that same issue in this context as well. Another possible option I considered was to ask participants for permission to use their tweets, but as these tweets are publicly available and I believe I took due care not to quote anyone out of context, I have chosen to use this material without express permission.

3.4 Data Analysis

In order to analyse the collected data, I made use of the thematic analysis approach, which consists in reading and re-reading the data to find recurrent themes (Skågeby 2011). From the raw data, I separated each of the themes in order to find a red thread. Sometimes new themes would emerge and lead me in another direction. I did have an idea in mind of how Bitcoin would be used in Venezuela based on my understanding of the technology but, in order to avoid any kind of confirmation bias, I took care, through an iterative process of carefully investigating the data, to identify emergent and recurrent themes.

3.5 Conclusive overview of the methodology

A mixed methods approach was taken so that it would be possible to answer my research questions. I used primarily online ethnography following the methods via data collection and online observation. Additionally, I also searched for academic articles, books and articles on the topic (both regarding Bitcoin and the political situation in Venezuela) and reports by reputable humanitarian organizations while still using the qualitative approach.

In order to make an adequate data analysis, I kept in mind the point that Wolcott makes “The major problem we face in qualitative inquiry is not to get data, but to get rid of it”. I wanted to focus on the purpose of this research, namely to get my research question answered as fully and as comprehensively as possible (Wolcott in Bryman 2012: 689)

IV. THEORETICAL FRAMEWORK

In this chapter, I will present the theories and concepts related to the present case of Venezuela and Bitcoin. Due to the novelty of blockchain and cryptocurrency it is still a relatively unexplored topic by researchers outside of the technology- and economy- sphere. This paper will therefore draw on other sources of academic writings to provide tools to analyze the topic further. It is also important to consider the social aspect and the core idea of Bitcoin and blockchain: its proposal to

restructure power relations in society, something, which is relevant to situations of political crisis and affects the situation of migrants and refugees in important ways.

This task of collecting scholarly material to write the theoretical framework was - in my opinion - made difficult by the fact that many scholars in the social field might naturally be predisposed against Bitcoin because the technology has been enthusiastically embraced by some anti-state, right-wing, libertarian anarcho-capitalists. However, my research shows that the Bitcoin community is not a monolithic political entity but contains a variety of political ideologies, including some which are progressive and humanitarian. Furthermore, while I do not claim to be a technology expert, I nevertheless found examples of commentators apparently misunderstanding important facets on how Bitcoin works on a technological level, which might have led them to erroneous conclusions about the viability of the technology.

4.1 The problem associated with new technologies in the humanitarian space.

New technology helps humanitarian development in many different ways. Mobile phones for communication, social media platforms and big data analyses, satellite and drone use to assess extent of disasters, biometrics in refugee camps, etc. However, there are indications that the humanitarian sector are concerned about the problems, which the introduction of new technologies create. Critical humanitarianism recognizes that technology may risk harming individuals, as it can lead to experimentation with humans, deprive people of their privacy, and reduce people to being objectified “just bodies” and objects of surveillance technology (Jacobsen 2015; Luppigini 2010; Aas 2006). For this reason, some scholars have claimed the discussion should focus less on what technology does *for* humanitarian action and more on what technology does *to* humanitarian action (Duffield 2016; Sandvik et al 2014: 222).

Duffield and Sandvik are making an important point. What is interesting, however, is that several humanitarian commentators are critics of Bitcoin, based on similar worries about technology innovation. Through my online ethnography research I found mentions of the “cypherpunk movement¹”, who have had this same concern about technology as the humanitarian community.

¹ A **cypherpunk** is any activist advocating widespread use of strong cryptography and privacy-enhancing technologies as a route to social and political change. Originally communicating through the Cypherpunks electronic mailing list, informal groups aimed to achieve privacy and security through proactive use of cryptography. Cypherpunks have been engaged in an active movement since the late 1980s. (Wikipedia 2019)

The former has also been focused on the role of technology (particularly related to computer science, data, surveillance and cryptography) in modern society and it is interesting to draw a comparison between these two communities' concerns, which are in many ways similar. However, the cypherpunks' agenda is clearly a more proactive one as it aims to build technology with the express purpose of making it useful for individuals to protect their privacy and circumvent government restrictions. In other words, they aim to build decentralized technology in response to this concern.

Such an agenda shows that technology design is never neutral and it is also the reason why cypherpunk ideology is often vilified as being something, which can facilitate criminal activity, drug dealing or other nefarious activities on the dark web.

4.2 Concerns about the digitization of money and a cashless society. Who benefits? Who suffers?

In this section, I intend to shed light on the implications of a cashless society, in other words, what impact will it have and what might the consequence of the application of such a technology in Venezuela or other parts of the developing world?

The move to digital money in large parts of the world are changing the ways we store money, as well as changing accounting and the exchange and transfer of money. The consequence is less and less reliance on cash and the prospect of a cashless society looming on the horizon.

A cashless society "makes sense" from a short-term business perspective, if "sense" means a capitalist/efficiency techno-scientific perspective, which is all about productivity and efficiency. It might also "makes sense" from the perspective of the banking sector cutting their costs and adding to their profits.

Aside from capitalist considerations of profit for the banking sector, proponents of a cashless society have pointed to the increased transparency of the systems as a way for law enforcement to stop money laundering, drug dealing and even terrorism. In the developing world, proponents have pointed to the necessity of developing tools aimed at increasing financial inclusion. These types of tools include various digital technologies such as mobile-money, biometric identification

(Donovan; Gusto & Roque in Small et al. 2018: 8) and other innovations that could potentially solve deep infrastructure problems.

However, Jenna Burrell points out that digital money cannot just replace the traditional payment methods of the “unbanked” without disruption because their financial infrastructure is “shaped by all the qualities and characteristics of human relationships, which can be intimate, affective, changeable, and idiosyncratic.” (Jenna Burrell 2018: 151)

The emergence of mobile money like Mpesa (digital mobile money) in Africa, has been a particularly interesting example of a development in the sphere of finance that has been widely adopted in parts of the Global South (Mas and Morawczynski 2009; Kendall et al. 2012; in Maurer et al. 2018: 07). While digital money promises to expedite transfer, it is not always clear how such services might create new sources of income for the poor. Also, it creates a data trail of financial transactions, which raises concern over issues of privacy and censorship, problems which are not present in cash-based systems (Ivan Small et al. 2018: 08).

While in some cases mobile-money services facilitate the sending of remittances or even savings, other accounts point to persisting concerns about trust and privacy issues. (Ibid :08)

4.3 Remittances - good or bad for the developing world?

In this subchapter, I am going to discuss some of the implications that remittances are having in Venezuela, using the work of the sociologist Susan Eckstein, who wrote about the topic and its consequences in Cuba.

In many ways, Cuba and Venezuela are similar in the sense that both countries have suffered from economic crisis and sanctions from the USA. In the modern history of Latin America, millions of migrants have send money back to their family and relatives and levels “soared as the gap in earnings opportunities between the so-called Global North and South grew when neoliberalism became entrenched worldwide in the last decades of the 20th century” (Castles 2004; Zolberg 1999 in Eckstein 2010:1047–1055), “and as the forces of capitalist globalization exposed people

in the South to consumption standards of the North without the means to attain them” (Portes & DeWind, 2004 in Eckstein 2010:1047–1055).”

According to 2019 estimates by the Inter-American Dialogue, Venezuelan migrants worldwide sent \$3.4 billion in remittances in 2018. This estimate is based on survey results suggesting that 75% of Venezuelan migrants are sending a significant amount of their income back home in the form of remittances. ³

Shannon O'Neil, researcher on Latin America Studies at the Council on Foreign Relations points out that, while individually helping the individuals who are still in the country of origin, these money flows overall have counterproductive political effects, i.e. they are either diminishing the pressure of governments to help their citizens or even helping to bolster repressive regimes. Governments might feel entitled to ignore citizen demands or even steal their money through taxation or direct confiscation. ⁴

One might therefore argue that remittances in some ways might actually lessen the possibility of a political solution to the problems of Venezuela. Susan Eckstein sums up the destructive loop effect this can have:

“Remittances infused more money into Latin America than foreign governments through bilateral and multilateral aid, and in some countries more money than foreign investors and foreign banks through loans. Debt crises in the 1980s, combined with the neoliberal reforms introduced in response, generated new poverty and inequality that drove unprecedented numbers of Latin Americans to move to the United States (and, secondarily, to Europe), from where they shared some of their new earnings with people dear to them who they left behind. Recipients welcomed the opportunity to improve their standard of living. Simultaneously, many governments welcomed the infusion of hard currency into their economies to help address their foreign debts, along with imports, investment, and budgetary needs.” (Eckstein 2010:1047–1055)

Scholars overall differ in how positively we should assess the effects of remittances in the developing world. While they are generally “pro-poor”, the macro effects are more ambiguous, as

they rest “on examining dynamics at both the individual, societal and institutional level.” (Kapur 2004 in Eckstein 2010: 1047-1055). States and governments have their own economic and political, short and long term, interests that are not necessarily in harmony with the interests of individual remittance recipients.

4.4 Conceptualizing the ideas of a society with a social contract vs. a society without a social contract.

In the following, I am going to discuss historical ideas about the state and its function - in terms of a social contract - in relation to its citizens.

4.4.1 Leviathan state

The state theories of Hobbes and the idea of a “Leviathan” state are explained in his book of the same name, first published in 1651. Hobbes described how human beings would wage war on each other without a centralized state, i.e. “Bellum omnium contra omnes”, and for this reason humans create a sovereign state, in which they accept to trade a part of their freedom in return for the state ensuring their security. Hobbes talks of a “commonwealth” in which “every man should say to every man: I authorise and give up my right of governing myself to this man, or to this assembly of men, on this condition; that thou give up, thy right to him, and authorise all his actions in like manner”. (Hobbes 1651:106)

The ideas set forth by Hobbes were revolutionary because, before Hobbes, kings ruled by divine right and did not have a formal obligation to their citizens. Now citizens and king entered into a social contract, in which citizens had both obligations and rights. Obligations towards obeying the law but also the right to be protected by the law from attacks from other human beings, something which presupposes a central power to enforce that law.

However, what happens when the state starts to break this contract, and no longer acts as the guardian of order but rather as the perpetrator of disorder, economic corruption and violence? How can citizens deal with this rupture of trust? How can they deal if the social contract is broken?

4.4.2 The counter-argument by Spinoza

Hobbes believed that large groups of people are not capable of 'agency' by themselves because they cannot coordinate their actions. For this reason, they are in need of incorporation into the social contract order. However, Benedict Spinoza, whose exposition of multitudes is mainly contained in his work 'A Theological Political Treatise and Political Treatise', "viewed multitudes as a hierarchy-less group of individuals who have the potential to create change without disturbing order". (Field 2012 in Nair 2018: 92).

In the Hobbesian world of ideas, multitudes lie outside the orbit of social contracts. They are like a "group of Byzantine generals who, while not trusting each other, still crave to have some sort of coordinated communication mechanism" (Swan 2015 in Nair 2018: 92).

Spinoza believes the masses can affect societal changes by demanding a change in the political order and he is also concerned that centralized government turns into a hierarchical organization. One might argue that Spinoza's thoughts is a support for democratical government vs. dictatorship, but I will suggest a deeper reading of Spinoza is possible in this context. In a democracy, power is structured less hierarchically than in a dictatorship, but a hierarchical order remains in the sense that there are leaders in society and the state remains.

When it comes to money, its production is highly hierarchical in virtually all countries, be they democratic or despotic, as countries (some of them in coordination as in the euro-system) have a central bank in charge of directing the monetary system. This is in line with chartalist view of money as a system, which must be directed by the state in order to function. It can be summarized "by the idea that taxes *drive money*". (Nigel Dodd 2015: 106)

Bitcoin and blockchains propose a radically different monetary system, as the users control the currency together without leaders (whether those leaders are dictators or elected), i.e. without the state as the manager of the system. All must agree to the consensus rules of the blockchain, but it is voluntary to join or leave the network (while it's not voluntary to not use a national currency as taxes must be paid). In this sense, one might view the phenomenon of cryptocurrencies as a modern Spinozian proposal on how to coordinate activity between human beings, which is non-hierarchical and opposed to the Leviathan model. Cryptocurrencies as Bitcoin seeks to bring

an alternative in the shape of the future that rests on advanced computing protocols that go beyond the 'fiat vision' of the Leviathans. (Nair 2018: 93)

4.5 The Marxist alternative

Another more radical proposal to eliminate the hierarchical structure of society is found in the work of Marx. Here the crux of the problem is deemed to be very fact that private property exists, which makes a class war between owners (capitalists) and labourers unavoidable. Therefore the solution can only be to decentralize control of the capital and, for this to happen, the state must have control over the economy. It is of course often pointed out that the establishment of Marxist governments around the world has mostly led to a new form of repressive power structure emerging, but Marx' (and Engels') idea is that this should ideally not happen because the state will disappear. It will become obsolete and a spontaneous new society will be able to govern itself without coercive measures.

Bitcoin is a decentralized technology, and the purpose of this paper is to investigate if it has real use cases, including the use case of individuals protecting their private property. It is interesting to consider the Marxist's objection to Bitcoin: In the long term it cannot be viable because it does nothing to solve the fundamental problems between humans as they are caused by private property in the first place.

For them centralization and a hierarchical structure is not the problem. "We should not see centralisation as the enemy, but rather the class that controls these centralised institutions." ⁵

In other words, it is not a problem if the state is centralized as long as the state's goals are in line with the Marxist thinking: to abolish private property.

Marxist commentators are thus skeptical about Bitcoin and this is further emphasized by the fact that, if Bitcoin really would find mass adoption, there would be a big wealth transfer from late adopters to early adopters of the technology. Should this occur, we would see an even bigger divide between rich and poor than we currently see in the world and this wealth transfer would asymmetrically favour the - already rich - Western world, as this is where the majority of capital is deployed.

In this paper, however, I will not explore the possibility of Bitcoin finding mass adoption, but limit myself to an investigation on whether the technology is being used to solve real problems for real people in Venezuela.

V. UNDERSTANDING BITCOIN

5.1 How does Bitcoin work on a technological and sociological level?

It is not the aim of this thesis to perform a deep delve into the technicalities of how Bitcoin works but some rudimentary understanding of how the system functions is necessary to understand the phenomenon.

The Bitcoin network was launched in the beginning of 2009 by the inventor of Bitcoin (who might be an individual or a group), using the pseudonymous name of Satoshi Nakamoto. A text encoded in the first block mined read: “Chancellor, on brink of second bailout for banks”, and is a reference to the 2007-08 financial crisis and how government dealt with that crisis by propping up the banks. Nakamoto’s comment reveals his skepticism of a government-run banking system. (Raskin et al. 2019: 2)

In the technical whitepaper, ‘Bitcoin: A Peer-to-Peer Electronic Cash System’, Nakamoto begins:

“A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution...based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party.” (Nakamoto 2008: 1)

The usual reaction of most people hearing about Bitcoin for the first time is more often than not complete dismissal of the idea that a new form of digital money, which is apparently created out of thin air, and somehow exists on the Internet, could be a viable idea. However, 10 years after it

was first launched, the Bitcoin network is still alive with the value of one single Bitcoin unit at around \$8.000 (as of October 15, 2019).⁶

According to Andreas Antonopoulos, a prominent figure in the Bitcoin community, Bitcoin can be defined as a ledger that can be used as money, and where the discourse circulates around “*an open, public, borderless, neutral and censorship-resistant system*” (Antonopoulos 2016).

One may also describe Bitcoin as a form of digital cash, as fiat cash possesses many of the same properties as Bitcoin.

Open means that anyone can access it, anyone can participate without authorization, vetting or verification of identity, nationality, ethnic origin etc. Also, anyone can build applications on top of the base protocol without permission, just like they can on the Internet (Antonopoulos 2016: loc.694). **Public** means all transactions on the network are visible and verifiable by everyone else.

Borderless means that because the Internet is borderless and the Bitcoin protocol lives on the Internet, this is an international phenomenon - it does not matter where you are, where you live or where you travel - you can still use Bitcoin and this is a logical consequence when money has become information with no physical form. **Neutral** means, in this sense, that when you use Bitcoin, the system does not care who the sender or the recipient is or what the purpose of sending or receiving the transaction is - the system merely communicates the transfer of value. (Antonopoulos 2016: loc.132) **Censorship-resistant** means that if someone wants to stop a transaction from going through, they cannot because the system is peer-to-peer - there is no trusted 3rd party who can interfere with the transaction or who can be pressurized by a government or political authority to stop the payment from going through. (Antonopoulos 2016: loc.462)

Several of these observations can be challenged. For example, Bitcoin is not open to everyone as there are still billions of people without a mobile device and without any Internet access at all.

And is it really borderless as one may argue the Internet is not really borderless? We see examples of Internet shutdowns, restrictions on content etc. One can also say that Bitcoin is not neutral, because a person who pays a higher transaction fee might in some cases be able to get his/her transaction dealt with first (however, as I understand Antonopoulos, the term “neutrality” does not refer to this, but to the fact that the system does not care about the purpose or the

identify of the person transacting). Finally one can question the “censorship-resistant” qualities of the system, as some view the mining process as rather centralized.

I will not go into detail about these objections. I will merely point out that, while these objections might have some merit, the system is more decentralized than the conventional financial system, which is controlled by banks, central banks and governments. In the existing system, revealing one’s identity is a pre-requirement for being able to transact digitally, banks can deny an individual to open an account, banks (and governments) can freeze accounts, and fiat payments across borders are often complicated and expensive, as they require conversion between one fiat system to another.

The cryptocurrency solves the so-called “double spending” problem in digital value transfers. (Swan 2015 in Nair 2018: 88) This problem can be defined as such: since every digital file can be copied an infinite amount of times, how can one create a digital cash system without a middleman? How can such a system be trusted if there is no trusted middleman to verify transactions?

Let’s first consider how money transfers are made in the traditional banking system, i.e. when we use a bank to make a digital money transfer to another person. We use a payment card (or some other type of digital payments like ApplePay, Mobilepay or Netbank) to contact our bank, the bank verifies we are good for the money, and makes the transfer go through if we are (while rejecting it if we do not have sufficient funds). In other words, the bank is the trusted middleman who ensures that we do not spend more money than we have, or “double spend” our money.

Now, if we wanted to make a digital payment while removing the bank - the trusted middleman - from this equation, how could this possibly be done? The idea in the Bitcoin system is to avoid the centralized record keeper by instead distributing the upkeep of the ledger to anyone who will participate. The ledger is now shared on thousands of computers world-wide and updated in unison approximately every ten minutes. If one of the participants in the system tries to forge his/her version of the ledger, it is immediately rejected by the rest of the network and thus no fraudulent transactions can find their way into the system. As a reward for performing this service (and to incentivize people to participate in the validation system), one participant is randomly

awarded a bit of newly minted Bitcoin - this is why this action is called “mining”. (Ammous 2018: 171-72).

This is of course a very basic description of how the Bitcoin network functions, and a more thorough explanation would exceed the scope of this investigation. However, the basic idea of a distributed ledger vs. a centralized ledger is the crux of the matter and easy enough to understand. The implications are that Bitcoin is a parallel financial system, which does not rely on banking or government institutions. This is especially relevant for people living in societies with weak or corrupt institutions, where trust in government is low.

Part of the difficulty of understanding the topic of Bitcoin is that we are dealing with a nascent technology, which is both complicated and confusing in many ways. In the article: “Bitcoin is a platypus”, Spencer Bogart makes the following analogy:

“The platypus is perhaps the most bizarre creature on the planet. It's venomous, egg-laying, duck-billed, beaver-tailed, otter-footed mammal. Those things simply aren't supposed to go together. In fact, when leading scientists first read accounts of the platypus, they dismissed it as a joke—and for good reason: the platypus is a seemingly impossible animal that combines features from three different animal classes and four different animal orders [...] Bitcoin is truly a strange beast—and that's a primary reason investors struggle to understand it: While Bitcoin has features from many different assets, it doesn't fit neatly into any pre-existing categories. This creates a psychological hurdle to contextualizing Bitcoin as an asset. Currency investors will tell you that Bitcoin isn't a currency because it's not broadly used as a unit of account (goods aren't typically priced in Bitcoin), commodity investors will tell you it isn't a commodity because you can't touch it, and Bitcoin certainly isn't a FinTech company because there's no CEO or headquarters. However, all this completely misses the point because while Bitcoin isn't good at being a currency, a commodity or a FinTech company, Bitcoin is great at being Bitcoin. Like the platypus, Bitcoin is a category creator.” ⁷

Overall, the best single definition I found of Bitcoin was the following by Adam Hayes:

Bitcoin is (...) a direct peer-to-peer exchange of property rights, a shared ledger of the exchange, and a mechanism to achieve consensus with reference to that ledger without resorting to a trusted third party (...) I then propose new ontologies for what blockchains are: as systems of accounting; organizational forms of contracting in lieu of firms; and as institutions in their own right capable of ordering social behavior. (Hayes 2019: 68)

5.2 Is Bitcoin finding adoption world-wide? And why is that relevant to the present study?

I want to focus on the use of Bitcoin in Venezuela from a social science point of view. However, in order to do this adequately, it is highly relevant to explore if Bitcoin is finding adoption elsewhere. Otherwise an investigation into the topic would appear rather unimportant, or even superfluous.

Bitcoin is similar to national money (so-called “fiat” money, i.e. money which the state has decreed to be legal tender) in the sense that numbers are used as entries in a ledger system. When you trade a fiat currency (for example the US \$) for Bitcoin, you basically exchange a number in one ledger system (\$) for a number in another ledger system (Bitcoin). The question is, why would anyone be incentivized to do this? To answer this question, we have to consider what the purpose of money is.

Ludwig von Mises has described the purpose of money as “a transmitter of value through time and space” (Von Mises 1912: 35). In other words, money has the purpose of 1) preserving and storing value across time 2) serve as a method of exchange, i.e. move value across space.

It is particularly the first function of money, which makes Bitcoin an interesting idea. One of the value propositions of Bitcoin is the concept of a “scarce virtual commodity”, i.e. that the number of Bitcoins is limited to a maximum of 21 million coins (Hayes 2019: 60-65). For this reason, if one trades numbers in a fiat system for numbers in the bitcoin system, one exchanges a number in an un-capped (inflationary) ledger system for a number in a capped (non-inflationary) ledger system.

All other things being equal, this should thus make Bitcoin a better money than fiat from the perspective of serving as a store-of-value.

Dodd claims that it is possible for the “chief scientist” at Bitcoin to remove the hard cap (the 21 million limit), based on a talk to a “Bitcoin trader”, who admitted as much (Dodd 2018: 43). If this is correct, it would reveal that Bitcoin is indeed not decentralized. If a “chief scientist” is able to perform updates to the computer code (including a change in the supply of Bitcoins), it’s hard to see how Bitcoin could remain valuable as the guarantee of it remaining a “scarce virtual commodity” would depend on the whim of the chief scientist. Saifedean Ammous, in contrast, writes the following on this topic:

“[Bitcoin] has ably resisted any attempt at changing it or altering its characteristics. The true depth of this statement and its implications has not been fully realized by most skeptics (...) The sovereignty of Bitcoin is derived from the fact that, as far as anyone can tell, the way its consensus rules operate, makes it very resistant to alteration by individuals. It is no exaggeration to say nobody controls Bitcoin, and the only option available to people is to use it as it is or not to use it.” (Ammous 2018: 222).

I do not claim to have expertise to be able to decisively say whether Ammous or Dodd are correct. For sure, Bitcoin will not be sustainable in the long run if Dodd is correct.

In addition to this, one can make several other objections at this stage. Are all things really equal? Is the updating of the ledger system (mining) really sustainable in the long run, as it consumes a lot of electricity? Indeed Bitcoin might be better than fiat money as a store of value, but isn’t it clearly inferior than fiat currency as a method of exchange/currency? Is Bitcoin really a good store of value as many people have lost money investing in Bitcoin because of its frequent price crashes? All these critical questions are valid and merit further investigation. However, the focus of this thesis is the use of Bitcoin in Venezuela and for that purpose, I am merely interested in examining if Bitcoin as a phenomenon is finding wider adoption or must be regarded as a passing fad.

To examine the question, I will point to 2 different graphs of the Bitcoin price history and begin with a linear graph (Figure 1). On this chart, Bitcoin looks like an enormous bubble, which has popped. ⁸



On Figure 2, however, we see a logarithmic chart of the same time period.. From this chart, we can perceive an altogether different possible interpretation than the “Bitcoin is an obvious bubble” - narrative, which many commentators, including Nobel Prize winner in Economics, Paul Krugman have claimed. ⁹ While price corrections are still visible on the logarithmic chart, the price of Bitcoin is clearly rising over the long-term and thus the price development appears to be - since there now is 10 years of price history - an indication of actual adoption.



Source: 10

VI. FINDINGS / RESULTS

In this chapter, I am going to present the findings of my research.

6.1 Bitcoin as a tool for Venezuelans to store value/protect wealth from inflation.

Using permissionsless systems become particularly relevant, when existing societal institutions are corrupt, on the verge of collapse, and unable to service citizens' needs. This is currently the case in Venezuela, where the state currency is hyperinflating. Under these circumstances, an inflation-resistant currency that anyone with access to a smartphone and the Internet can use, becomes attractive as a way to protect one's wealth in an environment of (hyper)inflation and other financial government restrictions. Asked if they were using Bitcoin as a store of value, the Venezuelans I interviewed addressed the issue in the following way:

"It has been my store of value since 2012. Compared with VES (Venezuelan Bolivars) anything is better store of value. In Venezuela people intuitively change their paycheck as soon as they can for whatever they can get their hands on. A can

of tuna, a bag of flour or toilet paper will serve as a medium of exchange later even if they don't need those products at the moment.” (male interviewer, 37 years old).

This was the most elaborate answer I got related to a concrete use case of Bitcoin as a savings vehicle. Other respondents stated that they regard Bitcoin as a store of value and way to “accumulate capital” but they did not specifically specify how they used it. These are some of the answers:

“Bitcoin is a deposit of value, a form of savings” (male, 21 years old).

“It seems to me to be an easier option for those who want to accumulate capital. [...] There are merchants who prefer to conceal some savings in Bitcoin and hide them from the police.” [...] I believe that Venezuelans need a free way to maintain their savings and generate wealth for them without the state getting into it. So Bitcoin is an excellent proposal.” (female, 22 years old).

“I believe that Venezuelans need a free way to maintain their savings and generate wealth for them without the state getting into it. So Bitcoin is an excellent proposal. (female, 22 years old)

“The more it increases [in value] its popularity increases. The properties that gives it security will make it a great asset to hold” (anonymous).”

From the last response, one may wonder if the use case is not speculation rather than store-of-value/protection against inflation - the two use cases necessarily overlap somewhat. However, in an environment of hyperinflation it becomes obvious that if you don't change the hyperinflating currency into something else, you lose your money.

One respondent pointed out that, while Bitcoin is used, most Venezuelans prefer to use foreign fiat currencies, i.e. euros or dollars in cash to store value:

“Yes, despite the volatility of bitcoin, many people use it as a safeguard of value, but most people still prefer dollars or euros in cash.” (male, 26 years old)

I felt some of these responses did not contain as much empirical data, as I had hoped for. I therefore wrote to my Venezuelan informant and he gave me a more concrete answer:

“You need to understand that many Venezuelans have nothing to store at the moment. But the middle class, for example, try to save anything other than bolivares. People and companies get paid in Bolivars everyday, so they need to turn them into other currencies, usually dollars in foreign bank accounts, directly through p2p trades on Whatsapp, but also through Bitcoin. So they are not long in Bolivars, they receive daily bolivars and convert them almost instantly to other currencies to protect themselves from hyperinflation. Perhaps from your point of view you think Bitcoin has a lot of volatility, but when you have hyperinflated currency you think otherwise. Bitcoin is volatile yes, but more up than down in long-term. Most people prefer dollars without a doubt. I believe in Bitcoin, so that's why I convert what I get into Bitcoins every month. But this is not the reality of most people, because they do not know how to use crypto and there is an idea that it is necessary to have a lot of money to buy Bitcoins.” (informant)

Regarding this matter, I also found this relevant article on the topic. A Venezuelan was quoted as stating:

“I keep all of my money in Bitcoin. Keeping it in bolívars would be financial suicide: The last time I checked, the rate of daily inflation was around 3.5 percent. That's daily inflation; the annual inflation rate for 2018 was almost 1.7 million percent. I don't have a bank account abroad, and with Venezuela's currency controls, there's no easy way for me to use a conventional foreign currency like American dollars. (...) I can't change too many Bitcoins at once, though. The government doesn't monitor cryptocurrency transactions (yet), but it does monitor transactions in bolívars — and any worth about \$50 or more will automatically freeze your account until you can explain to your bank where the funds come from. Still, you could say that cryptocurrencies have saved our family. I now cover our household's expenses on my own. My father is a government employee — in a printing department with no paper — and earns about \$6 a month. My mother is a stay-at-home mom with no income.” ¹¹

This tweet by a Venezuelan also shed light on the topic:



6.2 Bitcoin as a remittance tool for sending money in and out of the country in a permissionless way

As mentioned previously, since 2003, Venezuelan authorities have enforced capital controls to try to prevent capital flight, meaning that international digital transfers in traditional currencies are not possible without the government's approval. As many Venezuelans have fallen into poverty,

cryptocurrencies, which cannot be censored as in the traditional banking system, can be useful for Venezuelans as a remittance system to receive money from abroad. On this topic, Alex Gladstein, chief of Human Rights Foundation writes: "In an interview with researchers at the Open Money Initiative, I learned that the "liquidity time" of Bitcoin in Venezuela today is 15 minutes. Meaning, if you're in Caracas, I can send you Bitcoin from Miami and you can be holding bolivares in your hand within 15 minutes of my Bitcoin arriving on your phone." ¹²

My interviewees had the following to say when asked about the use of Bitcoin for remittances:

"I use bitcoin weekly to send money to my family. Hyperinflation is out of control so it is not worth it to send large amounts [of Bitcoin, since if it's converted to bolivars, it will rapidly lose value]. (male, 37 years old)

Other respondents talked about this use case in the following, more general, way:

"Currently in Venezuela Bitcoins are useful for remittances, store of value and to move your wealth to anyplace in the world in a relatively safe way. I've done all of those (male, 30 years old)

"Yes, I think this [remittances] is the most popular use." (male, 26 years old)

"Useful as it would avoid complications among many use cases for immediate payments in case of emergencies" (male, 42 years old)

"Remittances and investments are the main use cases that I see." (male, 23 years old)

"It is a tool that many people use to avoid hyperinflation and I think the most popular use is that of remittances. Many Venezuelans have left the country but still have relatives here to whom they send money to cope with the crisis and bitcoin I think is the most popular tool today through which they can do so." (male, 26 years old)

My Venezuelan informant, when asked this question, stated:

"Bitcoin is p2p [peer-to-peer] is much cheaper and easier to use if you know how to use crypto. The government is currently blocking bank accounts, there is very strong capital control here. Transferwise, for example, has stopped operating here, I believe for US sanctions. Western Union still works but you need to convert and pay higher fees than on the black market. And for many people, it's complicated to go to an agency. For the younger, crypto is more attractive. A concrete example, well, you need to understand that the situation is hell here, people are starving as you can see in the news. My uncle who has 2 daughters gets money from his brother-in-law from Spain every month. I don't know exactly how much, but I believe that without this it would be complicated. There are other cryptocurrencies being also used here. Ethereum, Litecoin, Dash, and BCH are the other cryptos used in the country, but Bitcoin is more used because LocalBitcoins is widely used in the country and they only support BTC. Some small local exchanges do accept other cryptos, but volumes are too small, even BTC volumes mostly because people fear local exchanges could be intervened and their personal IDs handled to the Government." (informant)

I also found information on this topic on Twitter, for example:



⚡ Eduardo 🇻🇪 ⚡
@Codiox

Replying to @fernandezpablo

Uso Bitcoin + LocalBitcoin para sobrevivir e intercambiar dinero de forma semanal. Puedo enviar pagos a mi familia en Venezuela y pagar deudas y compras por ese medio.

Translated from Spanish by Google

I use Bitcoin + LocalBitcoin to survive and exchange money on a weekly basis. I can send payments to my family in Venezuela and pay debts and purchases by that means.

1:29 AM · Sep 15, 2018 · Twitter Web Client

11 Likes



Mariano @Mariandipietra · Feb 28

Replying to @Mariandipietra and @nic_carter

for **example** in Argentina I met a venezuelan that was like the "head of **remittances**" for his 30 person group, and he was in charge to buy crypto (btc and eth) to send to **venezuela** for all the families he was representing. some via LB and some via Airtm



2



Mauricio @cryptonomista · Aug 9, 2018

How are Venezuelans making ends meet with \$30/month minimum wage?

Remittances payments from abroad.

Average remittance payments are about twice the minimum wage - which is barely enough for those fortunate ones to get the basics.



2



1



Bitcoin Venezuela ⚡

@btcven

Replying to @cryptonomista

The minimum wage is around \$2 USD, not \$30. \$30 is more like the professionals salaries (engineers, people with degrees, experienced...). The Government pays \$2-\$5 USD worth of Bolivars to their employees in most of the public sector.

People live using remittances & trading **\$USD**

10:58 PM · Aug 9, 2018 · [Twitter Web Client](#)



Michel Dahdah @micheldahdah · Jul 5

1/3 The reason people use BTC over USDC is due to the market dynamics of Venezuela. The everyday person usually doesn't use Localbitcoin or any crypto for that matter. Most people work through intermediary groups that provide USD/Bolivar liquidity.



1



5



Michel Dahdah @micheldahdah · Jul 5

2/3 This intermediary groups trade all day on Localbitcoin so they quote USD/Bolivar rates based on Localbitcoin rates, they then receive USD outside Venezuela, change it to BTC through normal exchanges and then to Bolivars through Localbitcoin.



1



5



Michel Dahdah

@micheldahdah

Replying to @micheldahdah @santisiri and 5 others

3/3 Finally, a significant part of the BTC liquidity in Venezuela Localbitcoin comes internally from all the Bitcoin mining operations. This makes Venezuela's market conditions extremely ideal for BTC enabled remittance solutions to flourish.

2:31 PM · Jul 5, 2019 · [Twitter for iPhone](#)

This last tweet thread is quite interesting because it shows that, while US\$, is the preferred currency of most Venezuelans, Bitcoin is easier to get into the country as it can be sent through the Internet, which US\$ cannot - at least not in an unrestricted way. (Mining also has an impact - I discuss this below)

As my informant touched upon in the above quote, the reason that cryptocurrencies are useful for remittance purpose in Venezuela is also that other remittance systems are being censored, either

by the Venezuelan government or due to the United States subjecting Venezuela to economic sanctions. This tweet confirms that Transferwise has recently stopped operating in the country:



Finally, this last tweet (below) does not speak of Venezuela but Iran is in a similar situation because of US sanctions and a repressive government. In such places, cryptocurrency have a real use case for international transfers, including for remittance purposes. ¹³



Alex Gladstein ✓
@gladstein

If you are trying to figure out why anyone would need to use the Bitcoin network when there are already so many great and convenient payment platforms, read this from our friend in Iran and consider that not everyone has the same financial options and access as you.



Ziya Sadr @Ziya_Sadr · Jul 5

Replying to @ButtCoin

I CAN'T use Apple pay/PayPal/Visa/Master or anything like them

I'm from Iran

I CAN use Bitcoin

What do you have to say?!

1:17 AM · Jul 6, 2019 · [Twitter for iPhone](#)

6.3 Has Bitcoin helped Venezuelans preserve their property/wealth while fleeing the country?



Venezuelan shows how she hid money in her hair as she crossed the border seeking work to support her family in Venezuela. 14 (Photo from Open Money Initiative 2019)

A growing number of Venezuelans have given up trying to survive in Venezuela and have chosen to leave the country. Since capital controls are strict, crime rampant and the Venezuelan authorities corrupt, those refugees who have some assets must consider how to securely exit the country with them. Using traditional methods to transport their savings like internationally denominated cash, jewelry or gold is highly dangerous in a hostile physical environment. Bitcoin is purely digital and has no corporeal existence. For this reason, I asked if the interviewees had personal experience or knew about somebody using bitcoin to transport value when physically crossing the border.

These were the answers that I got:

“I don't have much information about this. *I did it* when it was my turn to travel. I prefer to take a Trezor or Ledger [Hardware wallet used to store Bitcoin safely] than

cash since it is common for the authorities of the country to take the cash in foreign currency that you carry with you” (male, 26 years old)

“I’m sure that if I leave this country (that may happen soon), I’ll move my money using btc for sure.” (male, 30 years)

“There have been cases that are being done many ways to evade taxes and bolivars across the border btc.” (anonymous)

“I did [use Bitcoin to take value across the border]” (male, 37 years old)

My Venezuelan informant told me the following regarding this use case:

“I don’t know if you know how Bitcoin works but you can memorize the keywords - this is much safer when you cross the border because sometimes the police confiscate if you have cash. My brother’s family did that last year, he had about a thousand dollars in Bitcoin savings and he crossed the border to Colombia and nobody could know that. I am sure this is done a lot, but as the government is repressive this is something you only talk about among your close friends or family.” (informant)

I also found this narrative in article about life in Venezuela, this was written on the topic:

“...Cryptocurrencies also helped him [my brother] during the four-day trip itself [to Colombia]. Venezuelan military personnel at the borders have a reputation for seizing the money of people who want to leave, but Juan’s, being in Bitcoin, was accessible only with a password he had memorized. “Borderless money” is more than a buzzword for those of us who live in a collapsing economy and a collapsing dictatorship.” ¹⁵

I searched extensively on Twitter for empirical data regarding this use case, but found almost nothing except speculative considerations, maybe for the privacy reasons that my Venezuela informant mentioned. It is therefore hard to conclude to what extent this is a use case.

6.4 Bitcoin mining in Venezuela to generate an income.

Prior to conducting my investigation, I had speculated that the 3 uses cases mentioned above were actual use cases. But through my interviews, I discovered 2 other Bitcoin use cases, which are worth mentioning. The first is mining to generate an income. Anyone can participate in the validation of new transactions (updating the ledger) in the Bitcoin system through mining. What is required for this is a powerful computer - customized for the specific purpose of mining Bitcoin - called an ASIC (Application-Specific Integrated Circuit). In addition, you need access to the Internet and access to electricity. Regarding this use case, I had 2 respondents address it:

“I know of people at all levels related to Bitcoin somehow. From the single mom who bought a couple of Antminers [name of a ASIC model] and now is mining at home to the politicians running mid-size farms.” (male, 37 years old)

“It is very popular here because of the mining issue since electricity is practically free and because the government has spoken openly about cryptocurrencies.” (male, 26 years old)

I followed up with my Venezuelan informant regarding this. He wrote:

“Buying Bitcoins usually comes with a premium in the price paid, but mining can be done at global market prices. You can buy the mining equipment with USD you have in a US bank account, use funds from Amazon, or money they have in PayPal; to buy mining rigs at the regular price like everyone can in other countries. Then they can mine (if they can manage to import/smuggle the ASICs into the country) at very low electricity costs and sell the Bitcoins/altcoins at Venezuelan BTC market price, which carries a premium due to the difficulty of acquisition

("importing" the crypto currencies to the country) due to the money controls and foreign exchange controls." (Venezuelan informant)

From the tweet I already referred to above (by @micheldahdah), it seems that Bitcoin mining is a big business in Venezuela. Also, "Bitcoin mining consultant Randy Brito estimates that about 100,000 Venezuelans are "mining," although it is impossible to have an exact figure because many are protecting themselves by using servers in foreign countries, AFP reports. ¹⁶

I did not manage to find a Venezuelan willing to talk to me about him/her personally engaging in mining operations. I believe this was because of the several cases involving people getting arrested because of such activities in Venezuela, although it is not formally illegal. However, in this interview, which I found online a Venezuelan Bitcoin miner from Caracas is quoted as saying:

17

"Right now it [Bitcoin mining] means everything because through such activity you can defeat the economic catastrophe that we are facing by bypassing the currency exchange control. (...) You get to feed your family and to be able to save some money for the future among other benefits that comes with a surplus balance. (...) it [Bitcoin mining] usually only happens in the medium-to-high-class range given that people in poverty cannot afford the equipment. In that range, it could be something like one out of five. There's no way to tell [the exact number of miners] but easily in the thousands and possibly over one hundred thousand. The word on the street is that basically any physical space with an electric service is a hosting space. [The consequences of being caught mining is] not nice, beating, detention. (...) sometimes the police squad that visits your place decides to seize your mining equipment, and there is absolutely nothing you can do about it. (...) Rumor has it they install them on government facilities."

As this interview shows, there are also indications that the Venezuelan government is engaged in Bitcoin mining, something I found evidence of elsewhere.



While Bitcoin is helping ordinary citizens survive in Venezuela, we can also see that - possibly corrupt - government officials seek to profit from mining, too. In addition, Bitcoin mining has social effects (electricity being diverted away from other purposes) and environmental costs (high CO2 emissions). An investigation into these issues goes beyond the scope of this paper.

6.5 Bitcoin as a way to generate income through remote work.

Another use case, which my interviewees mentioned, is the use case of getting paid in Bitcoin for remote work for someone who is located abroad. For example, a translator or a software engineer can work in Venezuela for someone in Europe or the USA and receive payments in Bitcoin. My interviewees said the following about this:

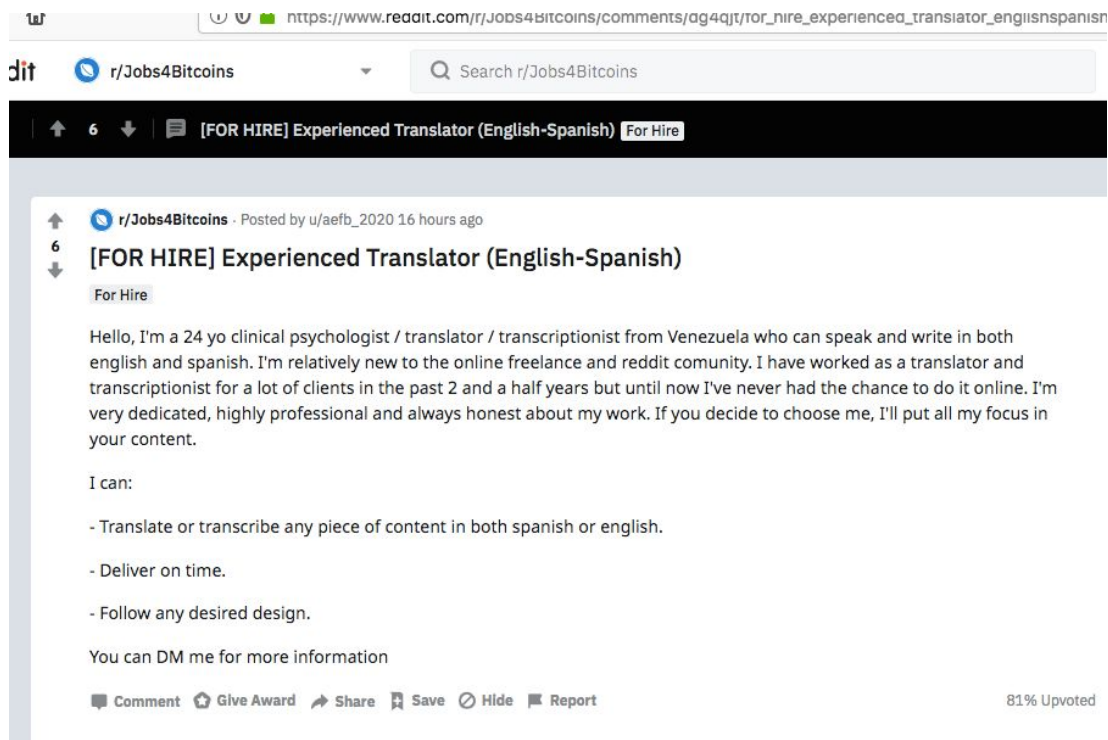
“[Bitcoin is useful to] generate remote jobs with payment in BTC.” (anonymous)

“[...] To conclude I can tell you that bitcoin has changed my life. I started to be part of this industry at the end of 2015 and bitcoin opened me to the doors to do business with people and companies that otherwise would never have been able to establish a commercial relationship with them.” (male, 26 years old)

My informant said the following regarding this use case:

“Well, not common but there are people who make their income in Bitcoin and other cryptocurrencies directly, from remote work, pay-to-click, captcha resolving, etc. Then they sell their Bitcoins for Bolivars because merchants usually only take bolivars for their products or because it is cheaper in Bolivars. I have a friend who is a web designer, he did this and got paid in crypto from someone in the US. “
(informant)

My research showed that several people were advertising this kind of service, for example on Reddit. Whether this is a net positive or a net negative remains to be seen, however, as one can fear this will lead to a form of social dumping.



6.6 The extent of Bitcoin adoption in Venezuela.

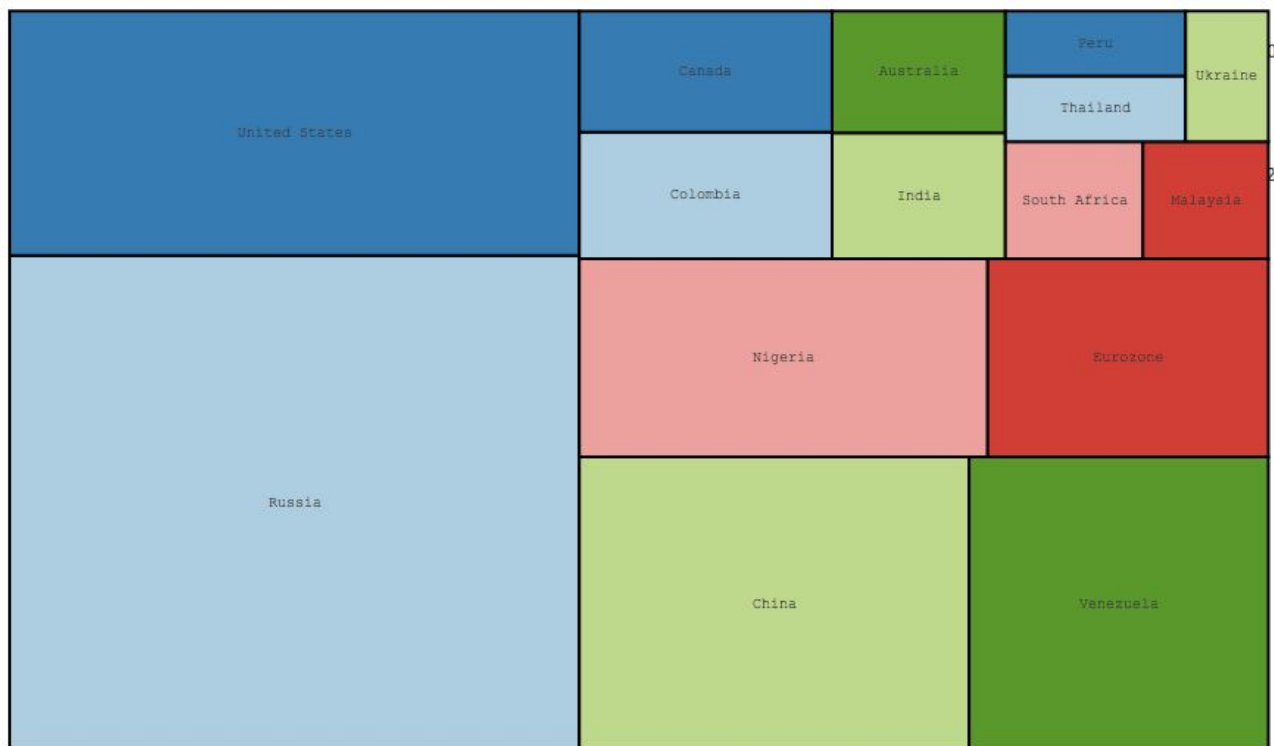
As I have discussed the Bitcoin price as a relevant indicator for measuring adoption on a global level, it is of course also relevant to look at the numbers, which are specific to Venezuela. Data scientist analyst Matt Ahlborg has done research into this matter. He compares the data from Localbitcoins.com (LBC) to try to measure the amount of Bitcoin adoption - outside of speculation - in various countries and makes the following remarks:

“On the whole, Bitcoin trades on LBC occur at an average of 4.5% over the USD equivalent spot price globally (...) Also, unlike other exchanges which post large crypto-to-crypto volumes, trading volume on LBC is almost exclusively fiat-to-crypto. Together, these circumstances substantiate the argument that, proportionally speaking, fewer traders are using LBC for speculative reasons in comparison to other exchanges. Additionally, because trades on the platform are denominated in over 150 fiat currencies, data pulled from it can shed light on

which areas of the world Bitcoin is seeing increased volumes and which areas aren't." 18

Ahlborg starts his analysis by showing a treemap of the top 15 country volumes in their equivalent US\$ value:

USD Equivalent BTC Volume (2018)

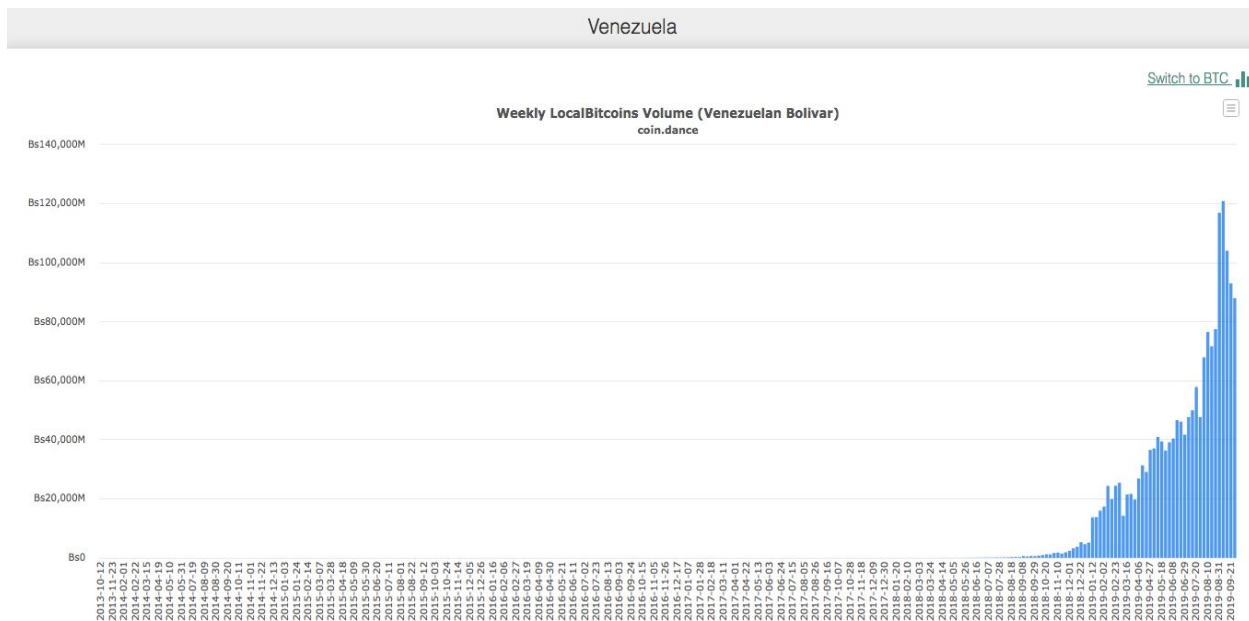


Source: see notes number 18.

While it is reasonable to assume that much exchange of cryptocurrencies in the West happens on regulated exchanges (which are almost non-existent in Venezuela), the share of Venezuela's trading activity of Bitcoin is nevertheless disproportionately bigger than the size of the country.

Ahlborg goes on to point out that in late 2018, when the global Bitcoin price fell significantly, and interest in Bitcoin in the West faded somewhat “(...) 23 countries on LBC had their best quarters ever. Almost all of these countries are in the developing world. While some of these volumes may seem insignificant now, consider that less than three years ago Venezuela’s volume was less than 1% of what it is now.” ¹⁸

Human rights activist Alex Gladstein writes upon this subject: “To give you an idea of the scale of Bitcoin activity in Venezuela today, consider that on April 26, 639 million bolivares were traded on the Caracas Stock Exchange. During that same week, the average daily volume of Bitcoin traded on one online platform alone — LocalBitcoins — was 5.2 billion bolivares.” ¹⁹



The responses from my interviewees regarding this question of adoption were:

“I would say that among the young people in Venezuela it's quite popular, a lot of Venezuelans knows about the existence of bitcoins, unfortunately they don't understand it really well. I tend to show optimism to people who ask me about Bitcoin, so far I've seen only positive feedback from people who already know about it, but those who don't are skeptical and this is completely understandable.”

[About the technical expertise to use Bitcoin]

Really hard to say, probably less than 1%. Most of the people I know tend to use wallets that make custody of their private keys and present to them a beautiful UX. I think this is a huge mistake, and a potential time bomb, if the platform you're using gets hacked you lose all of your btcs. Also, a lot of people just use Bitcoin without really knowing how it works (at least the absolute basis of it) and this is dangerous too.” (male, 30 years old)

“Very many people have heard about Bitcoin and cryptocurrencies, and a lot of them think it is a positive thing but not all of them use it. I don’t know how many percent of the population have the technical expertise to use Bitcoin.” (male, 23 years old)

“Necessity is the mother of opportunity. I can say that everybody, no matter their education level, between 15 and 45 years have heard, and read about bitcoin. Maybe I have some confirmation bias and my near circle is already into Bitcoin somehow but, I know of people at all levels related with bitcoin somehow. [...]” (male, 37 years old)

“The vast majority of Venezuelans believe that they know or have heard about bitcoin, it is very popular here because of the mining issue since electricity is practically free and because the government has spoken openly about cryptocurrencies. (male, 26 years old)

6.7 Limitations of Bitcoin use in Venezuela

Although I found evidence of Bitcoin use in Venezuela, I also saw signs of its limitations. While it is technically possible to use Bitcoin without the Internet, this requires a significant amount of technical skill, which makes it non-accessible to non-technical people, i.e. the majority. ²⁰

One interviewee wrote the following addressing this issue:

“I’ll give you some context: Currently, at least in the district where I live, we have roughly 6 working hours available due to the constants power shortage, public services are intermittent, internet service its completely unreliable and I could keep

adding issues to the list but that's not the point, the real point is that the amount of help that Bitcoin can provide via donations is really small.” (male, 30 years old)

As other interviewees mentioned above, it is still a relatively small amount of Venezuelans who know how to use Bitcoin on a technical level and use it correctly. This could be an issue and lead to monetary loss and a general distrust of Bitcoin. One interviewee addressed this issue in the following manner:

“Probably less than 1% [of Venezuelans use Bitcoin] . Most of the people I know tend to use wallets that make custody of their private keys and present to them a beautiful UX. I think this is a huge mistake, and a potential time bomb, if the platform you're using gets hacked you lose all of your btcs.” (male, 30 years old)

I believe the respondent addressed the following issue with this answer: Bitcoin is a system that allows for individual users to transfer and hold money **without** a third party by using private keys known only to the user. However, it **is** possible for an individual to use a custodian who holds the private key for him/her, just like is currently the case in the existing banking system. In that case, the user - possibly without realizing it - becomes vulnerable to third-party risk (the custodian taking his money) or to the custodian getting hacked. If this happens on a large scale, this could indeed be a “time bomb”. This is not a problem with the Bitcoin system itself but of solutions being built on top of the Bitcoin ecosystem. End users might not know the difference though, which could negatively impact people’s views of Bitcoin.

Another threat to Bitcoin is if the government decides to ban cryptocurrencies. One respondent said the following regarding this:

The current government wants to establish the use of this Decentralized Cryptocurrency as “Illegal”. It would be necessary to find another way to use Bitcoin as a resource for national use, although nowadays it is a currency with an incremental use, but in my opinion it is not showing the potential that Bitcoin could have in a Country due to the political issue.” (male, 21 years old)

Bitcoin is not illegal in Venezuela, but the threat of a ban looms. Probably, with a large black market, it's questionable how much of an effect a ban would have, but it is obvious that the impact would not be positive.

Other respondents addressed the technical limitations of Bitcoin. While being overall positive about Bitcoin's future, this is an issue:

"I definitely can see a future with Bitcoin in the world. However, Bitcoin still has some challenges to overcome like, slow confirmation of transactions, high fees per transaction, still difficult to use for some non tech savvy people(even though some people are working hard to make btc really easy to use!). But even if these problems persist, I would say that Bitcoin will survive in the future, it's a pretty solid protocol overall." (male, 30 years old)

Others interviewees addressed the issue of a lack of stores/shops where Bitcoin is accepted as payment:

"It's relatively easy to find online markets where we can buy and sell bitcoins in Venezuela. But locally, it's very difficult to find stores buying and selling cryptocurrencies or in which we can use Bitcoin ATMs. At least in Anzoátegui, there are not much presence of Bitcoin and cryptos in the local daily dynamic yet. But internet help very much." (male, 23 years old)

"I would like to see Bitcoin being accepted by all the commercial establishments in Venezuela, that would make a lot of things much easier (In reality I just want to be able to buy some pastelitos with btc =P)." (male, 30 years old)

While the increased interest of Venezuelans in Bitcoin is worth paying attention to, it should also be clear that we are not yet at anything approaching mass adoption of Bitcoin in Venezuela:

"The fallacy that bitcoin could "save" a country's whole economy assumes the country meets all the requirements for mainstream adoption. Just to start, there

would be needed widespread computer and financial literacy, reliable electricity infrastructure, stable internet service and an economy that not only allows the majority of citizens to count on a device to keep their digital wallets but also the safe migration from fiat money to digital money.”²¹

Another negative is that, while normal Venezuelan citizens are increasingly interested in Bitcoin, the same is apparently true for the government of Venezuela. Government officials can also use Bitcoin to circumvent sanctions imposed by the international community or to enrich themselves, as this Twitter (among many others) user pointed out.



6.8 A neo-Spinozean idea: The Austrian School of Economics

As a part of my investigations into Bitcoin, I also came across the so-called “Austrian School of Economics”, which is very popular among Bitcoin enthusiasts. I found countless Bitcoin Twitter threads and online articles about Bitcoin and its relationship to Austrian economics. Some, however, consider the Austrian school irrelevant: “The doctrines of the Austrian School of Economics are untenable” (Vienneau 2007: 01)

The method of Austrian economics is “praexology” (Wolfgang Grassl 2017: 533), i.e. individual human action as the starting point for examining economic phenomena. From a sociological standpoint, I find an ideology, which stresses individual choice rather than social dynamics as the driver of society’s fluctuations to be somewhat of an oddity. Human beings are mostly driven by the interplay of a myriad of social constructions (family, work relationships, power relations etc).

Whether its proponents are right or wrong is not the subject of my paper, however, and I find Austrian economics interesting because I consider the line of thought to be a neo-Spinozean idea. This school of economics originated in the late 19th century in Austria (hence the name) with Carl Menger as its main proponent. Later, Ludwig von Mises and Friedrich Hayek were important representatives. While the latter received the Nobel Prize in Economic Sciences in 1974, the Austrian School of Economics have been considered heterodox since the mid-20th century (Boettke 2013).

This school of economics runs in opposition to much modern economic thinking in the sense that it disagrees with chartalism. Chartalism argues that money originated with states’ attempts to direct economic activity (Rochon & Vernengo 2003) rather than - as the Austrians argue - a spontaneous solution to facilitate trade between individuals, who - without money - would face the “double coincidence of wants” problem. (Dodd 2016: 19)

The Austrian School of Economics holds that the economy is best served by the market, i.e. the sum of individuals freely choosing their own form of money. Thus the Austrian economists - in a sense - hold a neo-Spinozean point of view that it is the multitudes who voluntarily come to a consensus (without guidance from a government/ruler) about what form of money to use. One can observe how strongly Hobbes’ “fiat” (by decree) ideas dominate the discourse today as most people will probably find it odd to think of money as something, which is not a monopoly enforced and regulated by the state.

The Austrians, however, believe this monopoly status is detrimental to society. Hayek in 1984 said: “I don’t believe we shall ever have a good money again before we take the thing out of the hands of government, that is, we can’t take it violently out of the hands of government, all we can

do it by some sly roundabout way introduce something that they can't stop." (Hayek in Ammous 2018: 72)

In Venezuela, where the national currency has been mismanaged and Bitcoin, which is not a form of money controlled by any government, is finding at least some adoption, one might wonder if this does not give credence to the Austrian School of Economics' ideas of individuals choosing their own money, if free to do so. Of course, this is not a definitive conclusion, as most Venezuelans prefer better forms of fiat currency than the bolivar, i.e. foreign fiat currencies like the dollar or euro. The question is if this is either due to them being unaware of Bitcoin's properties (as well as unfamiliar with it and insecure about how to use) or whether they would prefer dollars or euros in any case.

VII. DISCUSSION / ANALYSIS

The aim of this paper has been to investigate the use of Bitcoin in Venezuela and how citizens use it to deal with the current social and economic situation there. My findings suggest that the 3 uses cases I expected to encounter are all real use cases in Venezuela, although remittances is the most important use case. In addition, I found 2 other use cases.

However, my findings also indicate that adoption of Bitcoin is still relatively limited in Venezuela and that several factors could hamper its growth, for example a government ban, intermittent electricity and Internet connection or a general lack of education on how to use the technology. Generally, the question remains whether Bitcoin is ultimately a positive or negative development for Venezuela. As I mentioned in the theoretical framework, the effects of remittances are not unambiguously positive.

In humanitarian discourse, there is also legitimate concern about the use of new technologies. In my paper, I have presented the case that Bitcoin is a technology, which allows for a neo-Spinozean, more horizontal power structure. However, some have argued the exact opposite, namely that Bitcoin could be viewed as a technological neo-Leviathan.

7.1 The consequences of Bitcoin remittances in Venezuela.

My research reveals that many Venezuelans rely on remittances for their survival, and in this context, Bitcoin plays a significant role. From a micro-economic perspective, i.e. the point of view of providing assistance to individual people in need, remittances are a positive phenomenon. Bitcoin appears to be relatively cheap compared to other remittance systems and also has the advantage of being peer-to-peer, as a form of digital cash. However, since Bitcoin is apparently not much used as a currency in daily transactions, Venezuelans receiving Bitcoin are still - more often than not - required to convert their money into bolivares, which entails risks of confiscation as normal bank accounts are under surveillance. Furthermore, it is clear that Bitcoin trading leads to even more activity on the black markets on Venezuela. Ideally, the state would regulate markets fairly in which case Bitcoin might be banned, as it can be used for illicit purposes. However, the “black market”, which is under discussion here, is simply trade among citizens exchanging everyday items, such as food, medicines or non-hyperinflating money, in other words, forms of trades, which allow for survival in harsh conditions.

In addition, it is worth mentioning that the continued flow of money through remittances (including remittances in Bitcoin) into Venezuela also benefits the government.

In January 2019, US national security advisor John Bolton ²², upon the United States introducing strong sanctions on Venezuela, predicted the downfall of the Venezuela regime “within weeks” and yet this has not happened, which shows that the Venezuelan regime has other means of funding its operations, maybe including using Bitcoin. Furthermore, the amount of value sent in remittances from abroad to individuals in Venezuela is estimated to be just over \$100 dollars pr. person, and it’s possible for a family to survive for a month on \$30. This means less pressure on the government to solve the problems Venezuelans face. Thus the effects of remittances on Venezuelan society cannot be thought of as unambiguously positive from a macro-economic perspective.

7.2 An important distinction between centralized and decentralized digital money.

In the theoretical framework, I presented the concerns related to the digital currencies and the possible elimination of cash. The empirical data from Venezuela shows that both physical cash denominated in bolivars, euros and dollars in cash as well as different forms of digital money is being used in Venezuela. The digital money includes dollar-accounts and bolivar-accounts in Venezuelan banks as well as Bitcoin (and other cryptocurrencies).

An important distinction must be made between these two types of digital currencies. Where the former is centralized and lends itself to surveillance and censorship by the Venezuelan authorities, the latter does not as it is decentralized, and in fact we see Venezuelan citizens employ Bitcoin as a way to avoid detection from the government. This is because, while the Bitcoin ledger is public (meaning that all transactions are visible to everyone else), use of the system is not tied to identity unlike in digital fiat systems. This is also why the Venezuelan government can use Bitcoin to bypass US sanctions, which might indeed be happening according to my findings. Bitcoin thus appears to be a form of “digital cash” and for this reason, one cannot automatically equate the spread of Bitcoin with a move to a cashless society subject to surveillance. On the contrary, one may conclude that Bitcoin - as is also the case with cash - is ideally suited for black market activities. This raises a number of ambiguous conclusions whether this technology is globally a progress or not.

7.3 Is Bitcoin a “Techno-Leviathan”?

Starting from the premise that the Leviathan state is sometimes repressive, does Bitcoin however not risk creating a “techno-Leviathan” as a replacement, in which human autonomy is lost?

The sociologist professor Nigel Dodd, basing his ideas on the work of Brett Scott, points out that migrating to technology would be to substitute the current system for another, described as “*a defined crypto sovereign whose rules we can contract to*”, which in the end would represent the same (Dodd 2018: 44). J.Z. Garrod, also relying on Brett Scott definitions, claims that in the traditional Leviathan state we “*must necessarily exchange some of our freedom for security.*” In the Bitcoin system, “Instead of relying on actual people to perform this function, however, the code is utilized as a defined crypto-sovereign whose rules we can contract to.” (Garrod 2016: 68)

Scott claims that “The key point is that if you get locked into a contract on that system, there is no breaking out of it.” (Scott 2014: 4). In other words, the Bitcoin system is merely a new form of the Leviathan state and Bitcoin’s structure is thus not horizontal in nature.

In my view, these objections are likely due to misunderstanding that Bitcoin is *both* a social *and* technological phenomenon. To think of the Bitcoin system as a “crypto-sovereign” is a mischaracterization, as Hayes points out:

“The interpretation of Bitcoin that the fundamental trust embedded in money has simply been transposed into ‘machine code’ while severing all ties with social relations is thus misplaced. Machine code has not replaced social relations; it has been joined together with them. In fact, by engendering true peer-to-peer interactions Bitcoin and other blockchains foster more direct personal connections, however mediated by technology, while sidestepping the conventional web of indirect relations between and among individuals, firms, institutions, and governing bodies. (...) Bitcoin and other ‘cryptoassets’ are properly socio-technological assemblages (Callon; Latour in Hayes 2019:50) that enroll both human and non-human elements ” (Hayes 2019: 50-51)

The thematic analysis strongly suggests that the neo-spinozean concept is very significant for an understanding of Bitcoin’s main value proposition, as it appears to be a way for everyone (the multitudes) to protect their private property through technological means, in contrast to the Leviathan state, where the same is done through political means. In the latter, the price for protection is much higher, both because the Leviathan state requires obedience from its subjects and because the Leviathan might conceivably misuse its power and go “rogue”. This latter possibility is not a possibility in the Bitcoin system as no one controls or is in charge of it. Furthermore, the Bitcoin network is open for anyone who has internet access, to join or leave. The “sovereign” is the multitude, i.e. the individual users cooperating voluntarily together in a horizontal social network. Bitcoin thus allows for a way to protect property rights, which can securely be transmitted from one actor to another without the need for conventional political and social structures (Hayes 2019). “By virtue of their design, crypto currency blockchains herald a world that is free from the caprices of the Leviathan. Such blockchains that are operated by a

bunch of faceless neo-Spinozian multitudes seek to go beyond the ideal of trust that has guided centralized entities.” (Nair 2018: 99)

None of the empirical data, which I found through my investigation on how Bitcoin is used in Venezuela, suggests that users are caught in a form of “techno-Leviathan” that destroy or constrain their social interaction. It is voluntary to use the system and it cannot impose its rules on any individual.

7.4 Will “freedom” and autonomy from the supposed tyranny of the state, not lead to “freedom” from the tyranny of the market? (Marxist’s concerns)

The Marxist criticism of Bitcoin appears to be better founded. Garrod believes Bitcoin is a right wing tool to preserve private property, and thus dismisses the idea. “Bitcoin neglects the power that capital holds over us” (Garrod 2016: 62). According to Marxist thinking, property rights are at the root of the problems of society because they lead to class war. Thus the solution is an abolishment of the classes and the creation of a state, which controls the common property of the people. One may argue that, in practise, Marxist governments have so far not achieved to create a good society in this way, but this is not the focus of this research. I merely want to point out that a system which aim it is to protect individuals’ private property rights cannot work in the long run from a Marxist point of view because it does not solve the fundamental problem of society. As Garrod puts it: “there is little work problematizing their relationship to capitalism, and whether they might in fact help strengthen capital's control over the social world—and, perhaps, by proxy, transform the very institutions of power and control that support capitalist social relations.” (Garrod 2016: 62)

Despite the criticism Garrod proposes that something can be saved from the Bitcoin experiment in digital decentralization and utilised on the Left or for the Commons. Based on the model of bitcoin technology, it may be “possible to create distributed collaborative organizations or ‘open cooperativism’ ” (Garrod 2016: 73). In Garrod’s scenario, there is the possibility of harnessing reactionary technology for progressive aims, that is, taking Bitcoin and its technology outside of its neoliberal emergence and context to forward the aims of the Left and serve the Commons.

However, my findings do not provide any clear indication that Bitcoin technology can be usefully employed to serve “progressive aims” in the traditional Marxist sense. On the contrary, all the empirical data that I collected indicate that individuals are mostly using technology to protect their

private property and for other purposes relating to their self-interests.

7.5 Why Bitcoin is relevant for development studies

The reason the topic of Bitcoin has caught my interest is because I view the phenomenon as a very different way to respond economic repression in the developing world. The cypherpunk idea of building technology with the express purpose of making it useful for individuals to protect their privacy, property and circumvent government restrictions is thought-provoking.

Much of the discussion around refugees and development in the field of social science is focused on how to give the disenfranchised and vulnerable better conditions by improving the existing systems, innovating, making institutions more transparent etc. But in the developing world, most of these systems are structured hierarchically. Working from within them is to acknowledge the primacy of these systems. In cases like Venezuela, when a certain threshold of decay and institutional rot has set in, it makes sense to propose an alternative or complement.

Dodd captures the essence of this neo-Spinozean idea - in relation to money - by writing:

“This discussion of monetary reform brings (...) back the prospect that money is reconfigured from below, such that it lives up to Simmel’s classic description of it as a claim upon society. With states’ role in the creation and governance of money being encroached upon from all sides, we seem to be facing a future in which money is more pluralistic than it has been throughout the modern era. This is not just a question of who produces money but also of who governs the infrastructure through which it flows.” (Dodd 2014: 14)

7.6 General implications for Bitcoin use in Venezuela and beyond

To be able to own and possess private property is a human right according to article 17 of the universal declaration of human rights, as stipulated in 1948 by the General Assembly by the United Nations. (UN 1948)

However, it is a fact that without free and fair elections, strong and independent institutions, division of the branches of government, freedom of the press etc, such declarations are in fact often hollow. Dictators and authoritarian governments all over the world might pay lip service to this official declaration when they are at the UN, while largely ignoring their citizens' rights at home.

Bitcoin is a technology, which, if its adoption keeps growing, might gradually change this power dynamic by making the confiscation of private property exponentially harder. Users of Bitcoin can store digital wealth without the knowledge of the authorities. Bitcoin has no physical form and only exists as a ledger entry on the blockchain. When you own a bitcoin, you actually don't own the bitcoin itself but a private key (think password), which allows you to move that Bitcoin. This means Bitcoin is pure information and close to unseizable. Since the Bitcoin system functions outside the reach of government, the only way to seize a person's Bitcoin is to seize that person physically and force him/her to reveal the private key. While that is of course possible, it is far more difficult and requires far more resources than to confiscate other forms of private property, like a house, physical possessions, gold or to simply block a person's bank account (which authorities can do with a single phone call). In other words, Bitcoin reduces the cost of defending one's private property very significantly while at the same time making it a lot more costly to attack same private property.

Critics of Bitcoin have pointed to this as a negative. The argument is that since individuals are able to transact and store value without the knowledge of authorities, this allows for terrorists, tax evaders or other criminals to pursue nefarious activities. In 2016, then-president of the United States, Barack Obama, made the following declaration regarding encryption and cryptocurrency:

"The question we now have to ask is, if it is technologically possible to make an impenetrable device, or system, where the encryption is so strong that there is no key, there is no door at all, then how do we apprehend the child pornographer, how do we disrupt the terrorist plot, what mechanisms do we have available to even do simple things like tax enforcement? If in fact you cannot crack that at all,

government cannot get in, everybody is walking around with a Swiss bank account in their pocket.”²³

Perhaps President Obama did not think that everyone having the equivalent of a Swiss bank account was a net positive. But in the developing world, where many people live under authoritarian rule with corrupt or even tyrannical leaders, it is fair to assume such leaders already have Swiss bank accounts - in actual Switzerland. Bitcoin's value proposition is to give every citizen who downloads a Bitcoin wallet and has a device to access the Internet the same powers. If this happens, authoritarian government would be very seriously weakened. Nair, sums up why this is a hard concept for most politicians to understand: “It is natural that the Leviathan is clueless about the principles of post trust world based on consensus by members of a large distributed network.” (Nair 2018: 99)

While it is beyond the scope of this investigation, it is probable that significant Bitcoin usage world-wide would lead to a reduction of government power in general, both democratic as well as authoritarian types of governments. Governments would no longer have a monopoly over the money supply and their capability to tax their citizens or confiscate their property would be vastly reduced. Depending on one's political point of view, one might view this as a net negative or a net positive for the societies in the developed world. I believe the welfare state model would be threatened by mass adoption of Bitcoin and police would have to allocate more significant resources to combat certain types of crimes, as individuals - including criminals - would be able to transact more anonymously. In much of the developing world, where we encounter most authoritarian governments and where welfare systems are either deeply dysfunctional or non-existing, one might argue that the government institutions **are** the criminals and that Bitcoin could conceivably be seen as a net positive. At least this is the impression I got from my investigations in Venezuela.

VIII. CONCLUSION

In conclusion, these findings suggest that Bitcoin is being partially adopted by a segment of Venezuelans to solve real problems related to remittances, protection against inflation/keeping savings, and in a general way to protect against confiscation.

As a matter of fact, Bitcoin is used today by only a minority of the (tech savvy) population of Venezuela, which makes its impact limited. However, among the young, knowledge and interest is on the increase.

I found other use cases of Bitcoin in Venezuela, such as generating income through mining cryptocurrency, and being paid for employment remotely. While the former use case might be specific to Venezuela because of subsidized electricity prices, the latter use case would seem to be very interesting for the billions of people without access to international markets/banking in the developing world. This might however only apply to a minority of skilled people who are able to offer their services via the Internet.

I would have preferred to do field work and to have traveled to Venezuela but since this was not possible, I consider that an online ethnography approach was reasonable since Bitcoin is very largely an online phenomenon. Furthermore, I also made use of articles (and interviews with people who are using the technology in Venezuela) to provide more material for my research and data collection.

More generally, my findings led me to believe that some humanitarians' concerns regarding the application of Bitcoin technology are unwarranted because Bitcoin can be considered as a form of digital cash. However, more extensive adoption of Bitcoin in the world would likely lead to - like in Venezuela - the development of an extensive black market economy.

Bitcoin remittances are undoubtedly helping individual Venezuelan citizens, and might - more generally - revolutionize the remittance business if cryptocurrencies find wider adoption. However, the macro-economic benefits of remittances in Venezuela (and the developing world in general) is

less evident and might even be harmful. Bitcoin mining might also be used by repressive governments to cement their power and resist change.

Meanwhile, the most essential objection against Bitcoin is possibly the Marxist criticism of the technology. If we consider private property to be at the root of social evils, Bitcoin and cryptocurrencies are not going to be a solution. However, if we view it as a basic human right to own private property, this criticism must at least be quantified. It is true that mass adoption of Bitcoin would mean a massive wealth transfer, which would lead to early Bitcoin adopters benefiting disproportionately.

A key finding of this research is that my theory of Bitcoin as a neo-Spinozean horizontal power structure at least have some merit to it. It is strictly voluntary to join or leave the Bitcoin network and everyone must follow the same consensus rules regardless of their power outside the network. This fact leads me to conclude that we must at least consider alternatives to the centralized Leviathan state and I believe we will more research in the field. As Hayes mentions, Bitcoin and cryptocurrencies will provoke interest among social scientist as systems of accounting, as organizational forms and as institutions (Hayes, 2019, 63).

A neo-Spinozean power structure is a challenge to any centralized political system, especially one which is as corrupt as the political system in Venezuela. If more people would migrate to a system of horizontal power structure, this might lead to a weakening of the existing hierarchical power structures. How exactly a “Bitcoin power structure” would look like remains somewhat unclear however.

The implications of these findings for the study of Bitcoin in Venezuela is that it is too early to say whether Bitcoin can become adopted more widely but that it has a number of interesting applications. I believe that many of the Bitcoin use cases I found in Venezuela might also be relevant in many other places in the world, such as China, Argentina, Brazil, Hong Kong, Nigeria, Zimbabwe and even in the Western world, where trust in government and financial institutions has been diminishing over the last decades.

Notes

1. "Bitcoin is a Demographic Mega-Trend: Data Analysis" (2019)
<https://medium.com/blockchain-capital-blog/bitcoin-is-a-demographic-mega-trend-data-analysis-160d2f7731e5> [Accessed 2 October 2019].
2. Source: Coin Dance Demography (2019) <https://coin.dance/stats#demographics> [Accessed 14 October 2019].
3. See The Dialogue: "Remittances to Latin America and the Caribbean in 2018"
<https://www.thedialogue.org/wp-content/uploads/2019/04/2018-NumbersRemittances.pdf>
 [Accessed 4 October 2019].
4. See Council on Foreign Relations - "Venezuelan remittances don't just save lives" 05 April 2019. <https://www.cfr.org/blog/venezuelan-remittances-dont-just-save-lives> [Accessed 29 September 2019].
5. See In Defense of Marxism - "Bitcoin utopian reflection of capitalist nightmare" 2014.
<https://www.marxist.com/bitcoin-utopian-reflection-of-capitalist-nightmare.htm>) [Accessed 4 October 2019].
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